Author Index

Adler, A. D., 73
Berlin, A. A., 187
Biczo, G., 217
Bloch, F., 1
Cazes, D., 109
Čížek, J., 199
Collman, J., 133
Doering, W., 133
Fried, J., 133
Gerber, S. H., 211
Ginzburg, V. L., 3, 133
Gutfreund, H., 95
Heller, J., 37
Hodgkin, J. H., 37
Hoffman, R., 133
Jensen, L. H., 47
Kagan, N. E., 191
Kampas, F. J., 81
Ladik, J., 217
Langer, J. S., 87
Little, W. A., 17, 219
Paldus, J., 199
Redly, J., 217
Rembaum, A., 157
Salem, L., 109
Schneider, R. S., 27
Tric, C., 109, 119
West, R., 65, 133

Subject Index

Bacteria, 197
Bond lengths, 47
Bond-Order alternation, 110, 119, 199, 208
Bonds, hydrogen, 48, 51, 56
Bubble diagrams, 98
Chains of metal atoms, 70, 136, 139
Charge density waves, 199
Collective modes, 102, 104, 107
Complex, charge-transfer, 24, 142
  donor acceptor, 171
  polymeric, 158
  polymeric iodine, 172
  polyvinyl-alcohol-iodine, 24
  salt-like, 174
  starch-iodine, 24
  transition metal, 135, 136, 137, 149
Conducting molecule, 141
Conduction mechanism, 157
Conformations of molecules, 47
Coulomb integral, 21
  interaction, 6, 17, 82, 120, 147, 217
  interaction, screened, 95, 211
  screening, 14, 130, 219
Crystals, dichroic, 137
  semiconducting, 142
Cyclodextrin, 197
Dielectric constant, 9, 98, 147, 150
DNA, 197, 217
Dyes, 191
Dyes, cyanine, 22, 38, 81, 153
  nitroso, 135
  organic, 147, 154
Effective interaction, 217
Electron scattering, 211
Electron scattering, inelastic, 212
Exchange integral, 21
Exciton damping, 10, 21
  mechanism, 3, 8, 10, 20, 81, 133, 151, 152, 154
  medium, 134
  spectrum, 14
Excitonic insulator, 208
  interaction, 211
Ferrocene, 29
Filamentary compounds, 111
Fluctuations, 13, 141, 148, 219
  amplitude, 90
  charge, 199
  phase, 90, 151
  spin, 199
  thermodynamic, 22, 217
  zero-point, 131
Hartree-Fock solution, 199
Hartree-Fock wave functions, 109
Huckel theory, 96
Hydrocarbons, conjugated, 211
Instabilities, 109, 153, 219
  Hartree-Fock, 119
  lattice, 110, 113
  non-singlet, 199
  pair, 110
  singlet, 110, 111, 114, 119, 128, 199
  triplet, 110, 112, 117, 128
Instability, number, 208
Interdisciplinary research, 143
Iodine complexes, 172, 197
Isotope effect, 20
Langmuir films, 73, 154
Layer compounds, 11
LCAO method, 96
Long-range-order, 13, 87
Many-body-problem, 140
Many-body-techniques, 95, 131
Metal-inorganic systems, 219
Metal-organic systems, 219
Microorganisms, 197
Molecules, inorganic, 135
One-dimensional metals, 139, 147
  systems, 87, 133, 141, 145
Oscillator strengths, 95, 107, 216
Pairs, bound, 17, 211
  electron, 1, 4, 5
Persistent currents, 87
Phase-transitions, 87
Phonon-mechanism, 17, 151
Phonons, 6
Photoconductivity, 158
Pi-electrons, 95, 123, 157, 187, 211, 217
Polarizable entity, 191, 212
  molecules, 197
Polyacenes, 28
Polyacetylene, 160

Polyconjugated systems, 187
Polycytosine, 217
Polyenes, 38, 109, 119, 199
  cyclic, 199, 201, 204
Polyferrocene, 30
Polymer, metallocene, 29
Polymers, conjugated, 37, 158
  ionene, 180
  schiff-base, 37
Polymetal compounds, 67
Polypeptides, 197
Polyphenylacetylene, 160, 187
Polyphenyls, 29
Polyphthalocyanines, 168
Polysaccharides, 197
Polysilanes, 65, 66, 219
Polysulphur nitride, 170
Polyvalent metals, 219
Polyynes, 163
Porphin, 73, 81, 153, 219
Porphyrin, 73, 191
Pyropolymers, 165
Random phase approximation, RPA, 98, 201, 208, 209
Sandwich compounds, 11, 15, 145, 147
SCF method, 96
Screening, 95, 97
  dynamic, 101
Semiconduction, organic, 74
Semiconductors, intrinsic, 137
  molecular, 136
  organic, 157
  polymeric, 157, 188
Sigma-electrons, 123, 217
Soret band, 82
Spin density waves, 119, 199
Spin waves, 89
Stability conditions, 201
  of excitonic system, 219
  ground state, 199
  molecules, 134
  thermal, 188
Stereospecificity, 191
Steric hindrance, 42, 45
Symmetry dilemma, 200
TCNE, 171
TCNQ, 135, 171
Technology, 3, 4, 143
Transition density, 212
  temperature, 3, 6, 18
Tunneling, Josephson, 148, 152, 153
Two-dimensional systems, 87, 133, 141, 220
Van Der Waal's radii, 48
Vibrational modes, 141, 149
X-Ray diffraction data, 47